

Frank Davis

List of Publications by Citations

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The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

81
papers

3,190
citations

32
h-index

55
g-index

82
ext. papers

3,458
ext. citations

6.1
avg, IF

5.36
L-index

#	Paper	IF	Citations
81	Biofuel cells--recent advances and applications. <i>Biosensors and Bioelectronics</i> , 2007 , 22, 1224-35	11.8	445
80	Current trends in explosive detection techniques. <i>Talanta</i> , 2012 , 88, 14-29	6.2	355
79	Recent trends in antibody based sensors. <i>Biosensors and Bioelectronics</i> , 2012 , 34, 12-24	11.8	205
78	Structured thin films as functional components within biosensors. <i>Biosensors and Bioelectronics</i> , 2005 , 21, 1-20	11.8	155
77	Electrochemical Detection of Uric Acid in Mixed and Clinical Samples: A Review. <i>Electroanalysis</i> , 2011 , 23, 305-320	3	132
76	Lactate in human sweat: a critical review of research to the present day. <i>Journal of Physiological Sciences</i> , 2012 , 62, 429-40	2.3	120
75	Sol-gel based sensor for selective formaldehyde determination. <i>Analytica Chimica Acta</i> , 2010 , 659, 251-76.6		89
74	2011 ,		84
73	A facile optosensing protocol based on molecularly imprinted polymer coated on CdTe quantum dots for highly sensitive and selective amoxicillin detection. <i>Sensors and Actuators B: Chemical</i> , 2018 , 254, 255-263	8.5	80
72	Sonochemically fabricated microelectrode arrays for biosensors offering widespread applicability: Part I. <i>Biosensors and Bioelectronics</i> , 2004 , 20, 328-37	11.8	62
71	Labelless immunosensor assay for prostate specific antigen with picogram per milliliter limits of detection based upon an ac impedance protocol. <i>Analytical Chemistry</i> , 2008 , 80, 6198-205	7.8	60
70	Labelless immunosensor assay for the stroke marker protein neuron specific enolase based upon an alternating current impedance protocol. <i>Analytical Chemistry</i> , 2008 , 80, 9411-6	7.8	58
69	Calix[4]arene based molecules for amino-acid detection. <i>Sensors and Actuators B: Chemical</i> , 2007 , 124, 38-45	8.5	56
68	Selective adsorption in gold thiol monolayers of calix-4-resorcinarenes. <i>Journal of the Chemical Society Chemical Communications</i> , 1994 , 2527-2529		56
67	Cadmium Sulfide Nanoparticles in Langmuir-Blodgett Films of Calixarenes. <i>Langmuir</i> , 1997 , 13, 3198-3204		54
66	Label-free and reversible immunosensor based upon an ac impedance interrogation protocol. <i>Analytica Chimica Acta</i> , 2005 , 537, 163-168	6.6	53
65	Label-less immunosensor assay for myelin basic protein based upon an ac impedance protocol. <i>Analytical Chemistry</i> , 2008 , 80, 2058-62	7.8	51

64	Calix-4-resorcinarene Monolayers and Multilayers: Formation, Structure, and Differential Adsorption. <i>Langmuir</i> , 1996 , 12, 5365-5374	4	47
63	Novel flexible enzyme laminate-based sensor for analysis of lactate in sweat. <i>Sensors and Actuators B: Chemical</i> , 2017 , 242, 502-510	8.5	46
62	Species differentiation by DNA-modified carbon electrodes using an ac impedimetric approach. <i>Biosensors and Bioelectronics</i> , 2005 , 20, 1531-8	11.8	46
61	Disposable screen-printed sensors for the electrochemical detection of TNT and DNT. <i>Analyst, The</i> , 2013 , 138, 346-52	5	44
60	Labelless AC impedimetric antibody-based sensors with pgml(-1) sensitivities for point-of-care biomedical applications. <i>Biosensors and Bioelectronics</i> , 2009 , 24, 1090-5	11.8	44
59	Labelless and reversible immunosensor assay based upon an electrochemical current-transient protocol. <i>Analytica Chimica Acta</i> , 2003 , 495, 21-32	6.6	43
58	Layer-by-layer immobilization of carbon dots fluorescent nanomaterials on single optical fiber. <i>Analytica Chimica Acta</i> , 2012 , 735, 90-5	6.6	42
57	Single gene differentiation by DNA-modified carbon electrodes using an AC impedimetric approach. <i>Analytical Chemistry</i> , 2007 , 79, 1153-7	7.8	40
56	A nanocomposite optosensor containing carboxylic functionalized multiwall carbon nanotubes and quantum dots incorporated into a molecularly imprinted polymer for highly selective and sensitive detection of ciprofloxacin. <i>Spectrochimica Acta - Part A: Molecular and Biomolecular Spectroscopy</i> , 2018 , 201, 382-391	4.4	39
55	Langmuir and Langmuir-Blodgett films of derivatives of alternating copolymers of straight-chain Eblefins and maleic anhydride. <i>Macromolecules</i> , 1991 , 24, 5695-5703	5.5	38
54	Detection of fluoroquinolone antibiotics in milk via a labelless immunoassay based upon an alternating current impedance protocol. <i>Analytical Chemistry</i> , 2008 , 80, 9233-9	7.8	36
53	Spontaneous multilayering of calix-4-resorcinarenes. <i>Journal of the American Chemical Society</i> , 1995 , 117, 10385-10386	16.4	34
52	Pyroelectric Molecular Baskets: Temperature-Dependent Polarization from Substituted Calix(8)arene Langmuir-Blodgett Films. <i>Langmuir</i> , 1995 , 11, 4623-4625	4	33
51	Long period grating based toluene sensor for use with water contamination. <i>Sensors and Actuators B: Chemical</i> , 2014 , 203, 621-625	8.5	32
50	Selective Ion Binding by LangmuirBlodgett Films of Calix(8)arenes. <i>Langmuir</i> , 1996 , 12, 1892-1894	4	32
49	The study of genomic DNA adsorption and subsequent interactions using total internal reflection ellipsometry. <i>Biosensors and Bioelectronics</i> , 2007 , 23, 377-83	11.8	31
48	A membrane-based immunosensor for the analysis of the herbicide isoproturon. <i>Analytica Chimica Acta</i> , 2011 , 699, 223-31	6.6	28
47	The electrochemistry of the ferri/ferrocyanide couple at a calix[4]resorcinarenetetrathiol-modified gold electrode as a study of novel electrode modifying coatings for use within electro-analytical sensors. <i>Journal of Electroanalytical Chemistry</i> , 2003 , 549, 119-127	4.1	28

46	Order and Structure in Langmuir-Blodgett Mono- and Multilayers of Resorcinarenes. <i>Langmuir</i> , 1998 , 14, 4180-4185	4	25
45	Chimeric polymers formed from a monomer capable of free radical, oxidative and electrochemical polymerisation. <i>Chemical Communications</i> , 2009 , 2759-61	5.8	22
44	Conjugated Polymers with Pendant Iniferter Units: Versatile Materials for Grafting. <i>Macromolecules</i> , 2011 , 44, 1856-1865	5.5	20
43	Langmuir and Langmuir-Blodgett Films of Poly(vinylpyridine)s Quaternized with Long-Chain Alkyl Halides. <i>Macromolecules</i> , 1994 , 27, 1957-1963	5.5	20
42	Label-free immunochemistry approach to detect and identify antibiotics in milk. <i>Pediatric Research</i> , 2010 , 67, 476-80	3.2	18
41	A hybrid molecularly imprinted polymer coated quantum dot nanocomposite optosensor for highly sensitive and selective determination of salbutamol in animal feeds and meat samples. <i>Analytical and Bioanalytical Chemistry</i> , 2017 , 409, 4697-4707	4.4	17
40	Langmuir-Blodgett thin film for chloroform detection. <i>Applied Surface Science</i> , 2015 , 350, 129-134	6.7	17
39	Volatile Organic Compounds Sensing Using Optical Fibre Long Period Grating with Mesoporous Nano-Scale Coating. <i>Sensors</i> , 2017 , 17,	3.8	16
38	Detection and imaging the expression of the trans-membrane protein CD44 in RT112 cells by use of enzyme-labeled antibodies and SECM. <i>Biosensors and Bioelectronics</i> , 2013 , 41, 282-8	11.8	15
37	A new application of scanning electrochemical microscopy for the label-free interrogation of antibody-antigen interactions. <i>Analytica Chimica Acta</i> , 2011 , 689, 206-11	6.6	15
36	Scanning electrochemical microscopy of genomic DNA microarrays--study of adsorption and subsequent interactions. <i>Analyst, The</i> , 2009 , 134, 1302-8	5	15
35	Calix[4]resorcinarene-surfactant complexes: formulation, structure and potential sensor applications. <i>Soft Matter</i> , 2009 , 5, 2746	3.6	15
34	Arrays of microelectrodes: technologies for environmental investigations. <i>Environmental Sciences: Processes and Impacts</i> , 2013 , 15, 1477-89	4.3	14
33	Sonochemically fabricated microelectrode arrays for biosensors. Part III. AC impedimetric study of aerobic and anaerobic response of alcohol oxidase within polyaniline. <i>Biosensors and Bioelectronics</i> , 2005 , 21, 666-71	11.8	13
32	A new application of scanning electrochemical microscopy for the label-free interrogation of antibody-antigen interactions: Part 2. <i>Analytica Chimica Acta</i> , 2012 , 741, 1-8	6.6	12
31	Enhancement of electrode performance by a simple casting method using sonochemically exfoliated graphene. <i>Analytical Chemistry</i> , 2015 , 87, 9273-9	7.8	11
30	Template and catalytic effects of DNA in the construction of polypyrrole/DNA composite macro and microelectrodes. <i>Biosensors and Bioelectronics</i> , 2013 , 41, 294-301	11.8	11
29	Electrochemical Detection of TNT at Cobalt Phthalocyanine Mediated Screen-Printed Electrodes and Application to Detection of Airborne Vapours. <i>Electroanalysis</i> , 2013 , 25, 2445-2452	3	11

28	Label-free impedimetric immunosensors for psoriasis--increased reproducibility and sensitivity using an automated dispensing system. <i>Biosensors and Bioelectronics</i> , 2013 , 44, 198-203	11.8	10
27	Hybridization of genomic DNA adsorbed electrostatically onto cationic surfaces. <i>Journal of Physical Chemistry B</i> , 2009 , 113, 7897-902	3.4	10
26	Construction and interrogation of enzyme microarrays using scanning electrochemical microscopy - optimisation of adsorption and determination of enzymatic activity. <i>Analyst, The</i> , 2011 , 136, 5287-93	5	8
25	Examples of amphitropic polymers: monolayer film, LangmuirBlodgett film and liquid-crystalline properties of some polymeric amphiphiles containing cholesterol moieties and those of some closely related non-polymeric amphiphiles. <i>Journal of Materials Chemistry</i> , 1996 , 6, 15-22		8
24	Characterisation of thin films of graphene-surfactant composites produced through a novel semi-automated method. <i>Beilstein Journal of Nanotechnology</i> , 2016 , 7, 209-19	3	8
23	Electrochemical Aptasensor for Detection of Dopamine. <i>Chemosensors</i> , 2020 , 8, 28	4	7
22	A chemical sensor based on a photonic-crystal L3 nanocavity defined in a silicon-nitride membrane. <i>Journal of Materials Chemistry C</i> , 2014 , 2, 8700-8706	7.1	7
21	Sonochemically fabricated microelectrode arrays for use as sensing platforms. <i>Sensors</i> , 2010 , 10, 5090-1338	3.8	6
20	Changing surface hydro- and oleophobicity with resorcinarene multilayers-a simple water/oil proofing process. <i>Langmuir</i> , 2004 , 20, 9075-9	4	6
19	Applications of Quantum Dots in Biosensors and Diagnostics 2017 , 183-199		5
18	Structures and binding of LB films of calix-8-arenes. <i>Supramolecular Science</i> , 1997 , 4, 201-206		5
17	Labelless Immunosensor Assay for the Stroke Marker Protein S-100 β Based Upon an AC Impedance Protocol. <i>Analytical Letters</i> , 2010 , 43, 2160-2170	2.2	4
16	Chapter 15 Ultra-sensitive determination of pesticides via cholinesterase-based sensors for environmental analysis. <i>Comprehensive Analytical Chemistry</i> , 2007 , 49, 311-330	1.9	4
15	Stereoselective adsorption on a gold θ iol monolayer with an enantiopure surface. <i>Journal of the Chemical Society Chemical Communications</i> , 1994 , 1199-1200		4
14	Electrical properties of alternating acid and amino substituted calixarene Langmuir-Blodgett thin films. <i>Journal of Physics and Chemistry of Solids</i> , 2020 , 136, 109146	3.9	3
13	Microband Sensor for As(III) Analysis: Reduced Matrix Interference. <i>Electroanalysis</i> , 2017 , 29, 2332-2339	3	2
12	A Membrane-Based ELISA Assay for the Herbicide Isoproturon in Soil Samples. <i>Analytical Letters</i> , 2012 , 45, 99-109	2.2	2
11	Electrical characterisation of stearic acid/calix[4]amine LangmuirBlodgett thin film. <i>Materials Chemistry and Physics</i> , 2014 , 143, 1258-1264	4.4	1

10	Smart Nanomaterials 2017 , 219-276		1
9	Monolayer behavior of calix-4-resorcinarenes and their surfactant complexes. <i>Thin Solid Films</i> , 2012 , 520, 6989-6993	2.2	1
8	Glucose Biosensors Recent Advances in the Field of Diabetes Management 2009 , 243-292		1
7	Procedure 24 Construction of an enzyme-containing microelectrode array and use for detection of low levels of pesticides. <i>Comprehensive Analytical Chemistry</i> , 2007 , e169-e176	1.9	1
6	An n.m.r. study of a polymeric Langmuir-Blodgett multilayer film. <i>Polymer</i> , 1994 , 35, 885-887	3.9	1
5	General Introduction to Biosensors and Recognition Receptors 2017 , 1-15		
4	Advances and applications in biofuel cells 202-214		
3	Label-Free Impedimetric Immunosensor for Nerve Growth Factor Protein Constructed Using an Automated Dispensing System. <i>Electroanalysis</i> , 2013 , 25, 1675-1682		3
2	Calixarenes 2011 , 77-125		
1	Calixarene-Based Gas Sensors. <i>Materials Horizons</i> , 2020 , 433-462		0.6